

May 2006



## *just the* **FACTs**

This fact sheet is provided as a reference to encourage a greater understanding of the various issues related to managing water in south Florida.

## **Herbert Hoover Dike Analysis Report Findings and Recommendations**

- Following two seasons of heavy seasonal rainfall and multiple hurricanes, the SFWMD Governing Board commissioned **an independent, expert review panel to evaluate all U.S. Army Corps of Engineers documents concerning the structural integrity of the 140 mile-long Herbert Hoover Dike** surrounding Lake Okeechobee.
- Three widely recognized experts in dam safety and geotechnical analysis evaluated new storm data about the lake and assessed the dike's integrity. Panel members: Leslie G. Bromwell, Sc.D., P.E., expert on earth structures and foundations; Robert G. Dean, Sc.D., P.E., University of Florida, expert in hydraulics and water wave monitoring and Steven G. Vick, P.E., specialist in dam safety, risk analysis and geotechnical engineering.
- **The Herbert Hoover Dike as constructed today does not meet current dam safety criteria. Of primary concern is seepage-related erosion.** Remedial repairs are made by the U.S. Army Corps of Engineers as erosion sites are found, but ongoing erosion is impacting the dike's structural integrity. If not addressed, the likelihood of multiple breaches increases.
- **The current repairs and repair timeline are not adequate to address the seepage problems or to ensure stability of the dike.**
- Internal erosion due to seepage increases when the lake level is high and when wind-driven waves impact the dike's earthen structures. In 2004 and 2005, high rainfall and hurricanes produced both of these conditions.

### **Recommendations**

- Seek the necessary Congressional authorization to improve the dike to dam standards. This includes funding for the necessary work.
- **Fast-track critical and extensive repairs to the dike.** Improvements to the dike are essential for protecting communities surrounding Lake Okeechobee.
- Develop engineering solutions to adequately protect the dike against wave action, storm surges and seepage-related erosion.
- **Modify the Lake Okeechobee regulatory schedule to lower the lake level until repairs are complete.**
- Position adequate materials and equipment before the start of hurricane season on June 1 to promptly implement seepage repairs.
- Re-evaluate the current flood inundation maps for Lake Okeechobee in order to better delineate areas currently susceptible to flood impacts.
- **Local and county governments are asked to work closely with the Florida Division of Emergency Management to update emergency preparations and evacuation plans.** A well-rehearsed plan for bringing citizens out of harm's way continues to be an essential component of responsible flood protection.
- Continued state and local support for implementing *Acceler8* projects will supplement rehabilitation and emergency preparedness plans. These Everglades Restoration projects provide significant water storage, aid in local flood protection and improve management of water levels in the lake.



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# Lake Okeechobee Flood Control System



The **Herbert Hoover Dike** surrounds Lake Okeechobee, spanning 140 miles. The Dike has been impacted by wind-driven waves and erosion-related seepage.

**Yellow line** indicates area of most concern, a 68-mile reach from Port Mayaca to Moore Haven.

**Red arrows** indicate direction of flow in rivers, creeks and canals.